

### REMARKS

Applicant's invention enables a user to efficiently search a complex patent document database using one or more unfamiliar search keys relating to a plurality of search fields. The user can start searching for files in the database by entering one or more familiar search conditions, such as searching according to keywords in the patent abstracts field. This search will return a listing of relevant files as well as a plurality of unfamiliar search keys for a plurality of search fields, such as IPC symbols and F-terms. Even a sophisticated patent examiner or patent attorney will likely be unfamiliar with most search keys associated with search fields such as IPC symbols and F-terms, given that there are over 68,000 IPC symbols and over 200,000 F-terms. Keyword searches are often imprecise and will result in a large number of irrelevant "hits." Since the aim of many prior art searches is to find the most similar prior art references possible, the scope of the search is likely to be very narrow and the search conditions will likely need to be refined several times. Applicant's invention makes it easy to repeatedly refine searches by displaying the search condition, search result, and search key list windows concurrently so that the user can keep refining his or her search with the search keys.

Claim 1 is rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Publication No. 2004/0236736 to Whitman et al. (hereinafter "Whitman") in view of U.S. Patent No. 6,571,241 to Nosohara (hereinafter "Nosohara"). Applicant respectfully traverses.

Claim 1 has been amended to clarify that a retry search instruction unit is operable to cause a searching unit to retry the search for a desired patent document data file that satisfies a new search query where search keys are added to a previous search condition with a logical OR. As shown by FIG. 10, Applicant's invention enables a user to select one or more search keys from search key list window 53 and paste these search keys into the search queries in search condition input window 51

using a logical OR, retrying the previous search with new modifications. Whitman does not teach or suggest retrying a previous search by modifying the previous search conditions by appending the search conditions with one or more search keys using logical OR operations. Furthermore, Whitman does not teach or suggest an extraction unit that extracts search keys based on the returned patent document data.

Whitman discloses a search engine system that generates related phrases by storing and analyzing a history of search queries submitted to a search engine by a community of users. *See* Whitman, Paragraph [0026], Lines 1-4. These related phrases are presented to the user as hyperlinks so the user can click on the link to use the related phrase as the new query. *See* Whitman, Paragraph [0051], Lines 11-14. In fact, Whitman specifically teaches away from generating related terms and towards related phrases, as follows:

“The present invention addresses this and other concerns by using information about historical query submissions to a search engine to suggest previously-submitted, related search phrases to users. The related search phrases are preferably suggested based on a most recent set of query submissions data (e.g. the last two weeks of submissions), and thus strongly reflect the current searching patterns or interests of users. The invention is preferably implemented within a search engine used to locate items that are available for electronic purchase, but may be implemented without other types of search engines.” Whitman, Paragraph [0010].

Whitman does not teach or suggest retrying a previous search that is modified by appending the previous search conditions with one or more search keys using logical OR operations. Whitman discloses that related phrases may be generated, such as “Walkin the Dog,” “To Say Nothing of the Dog,” and “Don’t Shoot the Dog,” in response to a search condition such as “Dog.” *See* Whitman, FIG. 8. The user can then try one of these new phrases as the new search condition. Morphing a previous search condition into a phrase is different than modifying the previous search condition using search keys. Whitman’s invention performs an

entirely new search using a related phrase instead of modifying the previous search. This new search rigidly forces the user to use the related phrase in its entirety instead of providing one or more search keys in a plurality of fields to enable the user to refine his or her search at will.

In contrast, Applicant's invention retries the previous search by appending the search conditions with one or more search keys relating to a plurality of search fields such as IPC symbols and F-terms using logical OR operations. It should also be noted that a user is free to modify the search conditions in the search condition input window 51 and can therefore change the appending operation to a logical AND if desired. *See* Specification, Paragraph [0104]. Thus, the user will retry a refined version of the previous search instead of performing an entirely new search. Using one or more search keys in a plurality of search fields provides the user with the flexibility to really focus and refine his or her search by using a combination of logical OR and logical AND operations in conjunction with the search keys and search fields. *See* Specification, Paragraph [0019].

Enabling the user to refine his or her search with one or more search keys provides the user with several significant advantages over simply generating a related phrase. First, search keys provide the user with access to unfamiliar yet important search criteria, whereas related phrases are just another form of natural language keyword searches that the user is familiar with and could have used in the first place. Thus, the user does not gain access to any additional search engine functions. Second, search keys provide access to a plurality of search fields, whereas related phrases are still natural language keyword searches that are imprecise and therefore impractical for complex, unfamiliar databases such as patent document databases. Third, search keys provide the user with the flexibility to refine a search to make it broader or more focused by adding or removing combinations of search keys to the search conditions, whereas related phrases are specific and standalone searches that cannot as easily be combined. Last, search keys allow the user to

iteratively or cyclically perform searches, building and improving on previous searches by adding or subtracting search keys, whereas related phrases replace previous searches and cannot as easily be improved. FIG. 10 of the present application depicts how Applicant's invention makes it easy to refine searches by allowing the search input condition window 51, the search result list window 52, and the search key list window 53 to be displayed concurrently.

Furthermore, the Office Action asserts that Whitman discloses an extracting unit operable to extract a plurality of frequently-used search keys for each of the fields, from the data file that is a search result by the searching unit. Applicant respectfully disagrees.

Whitman does not teach or suggest that the extraction unit extracts search keys from the data file that is a search result by the searching unit. Whitman instead teaches that related phrases are generated by analyzing a history of search queries submitted to a search engine by a community of users. See Whitman, Paragraph [0026], Lines 1-4. In contrast, Applicant's invention has an extraction unit that extracts search keys from the data file that is a search result of the searching unit and not from a history of search conditions submitted to a search engine by a community of users. Referring to FIGS. 7A-C of the present application, search keys for each search field are ranked according to hit ratios obtained by dividing the number of patent documents that contain that search key by the number of patent documents selected as key extraction targets. Thus, there is no reliance on search conditions submitted to the search engine by a community of users.

Whitman's invention likely pertains to an online bookstore where the online merchant wants to direct the user towards popular items. Returning a list of related phrases may deflect the user away from his or his intended target and towards a popular product that previous users have purchased. In contrast, Applicant's invention pertains to a patent document database where

sophisticated patent examiners, agents, and attorneys want to focus their search on very specific areas of prior art. The user will not want to be deflected towards frequently-searched patent documents, but rather will be searching for a very small group of patent documents. For example, the user may only want to find patent documents associated with a single F-term. However, since there are over 200,000 F-terms, it is unlikely that the user knows exactly which F-term he or she is looking for. Applicant's invention allows the user to determine the specific F-term by continually refining his or her search.

Using an extraction unit that extracts search keys from the data from search results instead of relying on a history of queries by a community of users is advantageous for other reasons as well. One reason is that the history of search conditions submitted to the search engine by a community of users does not have to be stored or analyzed, saving storage space and processing power. Another reason is that this avoids the problem where a keyword is a homonym for a completely unrelated word and the user is searching for the less common word whereas the community of users typically will search for the more common word.

The Office Action admits that Whitman does not disclose a search engine apparatus where the document data files are patent documents and where there are one or more search keys pertaining to a plurality of search fields. The Office Action asserts that Nosohara teaches these features, but the Office Action does not explicitly provide any motivation to combine Whitman with Nosohara. The Supreme Court recently held that the analysis of combining prior art references should be made explicit.

Often, it will be necessary ... to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at

issue. To facilitate review, this analysis should be made explicit. *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1740-41 (2007).

Nosohara discloses a search system for searching a database containing patent document files in a plurality of languages. Nosohara discloses that data regarding the abstract, F-terms, IPC symbols, and other keywords may be stored in the database. *See* Nosohara, Column 3, Lines 31-36. However, Nosohara does not teach or suggest the improvements afforded by Applicant's invention, in particular generating a list of frequently-used search keys pertaining to a plurality of search fields.

A person of ordinary skill in the art would not be motivated to combine Whitman and Nosohara in the fashion claimed by the present application. As stated by the Office Action, a hypothetical combination of Whitman and Nosohara would create a search engine that is able to retrieve patent documents in a variety of languages. Neither Whitman nor Nosohara teach or suggest generating a list of unfamiliar search keys in a plurality of search fields, so the hypothetical combination would not have this feature either.

Claims 2-3, 17, and 20 depend from independent claim 1 and are seen as allowable for the reasons stated above regarding the patentability of claim 1.

Applicant respectfully requests that these rejections be withdrawn.

For the reasons stated above, Applicant now believes the application is in condition for allowance and early notification of the same is respectfully requested.

If the Examiner believes that a telephone conference will assist in the prosecution of this matter the undersigned attorney can be contacted at the listed telephone number.

Very truly yours,

**SNELL & WILMER L.L.P.**

A handwritten signature in black ink, appearing to read 'J. Price', is written over a horizontal line.

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